



Arch Chemicals, Inc.

MATERIAL SAFETY DATA

FOR ANY EMERGENCY, CALL 24 HOURS/7 DAYS:	1-800-654-6911
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300
FOR ALL MSDS QUESTIONS & REQUESTS, CALL MSDS CONTROL:	1-800-511-MSDS

PRODUCT NAME: HTH® ALKALINITY PLUS

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

REVISION DATE: 12-17-2001 SUPERCEDES: 03-22-1999
MSDS NO: 00007-0016 - 61303

MANUFACTURER: Arch Chemicals, Inc. 501 Merritt 7 PO Box 5204 Norwalk, CT 06856-5204

SYNONYMS: Sodium bicarbonate, Alkalinity Adjuster.
CHEMICAL FAMILY: Carbonate
FORMULA: NaHCO_3
DESCRIPTION: Alkalinity adjuster for swimming pools and spas.
OSHA HAZARD CLASSIFICATION: Eye irritant

SECTION 2 COMPONENT DATA

PRODUCT COMPOSITION

CAS or CHEMICAL NAME: Sodium bicarbonate
CAS NUMBER: 144-55-8
PERCENTAGE RANGE: 99.0-100%
HAZARDOUS PER 29 CFR 1910.1200: Yes
EXPOSURE STANDARDS: None Established

SECTION 3 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

DO NOT TAKE INTERNALLY. AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. UPON CONTACT WITH SKIN OR EYES, WASH OFF WITH WATER. AVOID BREATHING DUST.
STORAGE CONDITIONS: Store in a cool dry area
DO NOT STORE AT TEMPERATURES ABOVE: 85 Deg.C (185 Deg.F)

PRODUCT STABILITY AND COMPATIBILITY

SHELF LIFE LIMITATIONS: Unlimited if stored in a cool, dry place away from moisture.

INCOMPATIBLE MATERIALS FOR PACKAGING: None known
INCOMPATIBLE MATERIALS FOR STORAGE OR TRANSPORT: Acids

SECTION 4 PHYSICAL DATA

APPEARANCE: White crystalline powder or lumps
FREEZING POINT: Not Applicable
BOILING POINT: Decomposes
DECOMPOSITION TEMPERATURE: 109 Deg.C (228 Deg.F)
SPECIFIC GRAVITY: 2.2
BULK DENSITY: 2.159
pH: Not Applicable

VAPOR PRESSURE @ 25 DEG.C: Not Applicable
SOLUBILITY IN WATER: 8.5-10% at 18-25 Deg.C
VOLATILES, PERCENT BY VOLUME: Not Applicable
EVAPORATION RATE: Not Applicable
VAPOR DENSITY: Not Applicable
MOLECULAR WEIGHT: 84
ODOR: None
COEFFICIENT OF OIL/WATER DISTRIBUTION: Not Applicable

SECTION 5 PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

PERSONAL PROTECTION FOR ROUTINE USE OF PRODUCT:

RESPIRATORY PROTECTION: Respiratory protection not normally needed.
If dusting occurs, wear a NIOSH approved
dust respirator.
VENTILATION: Local exhaust ventilation is recommended if dusting or
industrial use occurs. Otherwise, provide good general
room ventilation for non-industrial type application.
SKIN AND EYE PROTECTIVE EQUIPMENT: Wear impermeable gloves and chemical
goggles to avoid skin and eye contact.

EQUIPMENT SPECIFICATIONS:

RESPIRATOR TYPE: NIOSH approved dust respirator
PROTECTIVE CLOTHING TYPE: (This includes gloves, boots, apron,
protective suit): Neoprene

SECTION 6 FIRE AND EXPLOSION HAZARD INFORMATION

FLAMMABILITY DATA:

FLAMMABLE: No
COMBUSTIBLE: No
PYROPHORIC: No
FLASH POINT: Not Applicable
AUTOIGNITION TEMPERATURE: Not Applicable
FLAMMABLE LIMITS AT NORMAL ATMOSPHERIC TEMPERATURE AND PRESSURE (PERCENT
VOLUME IN AIR): Not Applicable

NFPA RATINGS: Not Established

HMIS RATINGS:

Health: 1
Flammability: 0
Reactivity: 0

EXTINGUISHING MEDIA: Not Applicable

FIRE FIGHTING TECHNIQUES AND COMMENTS: Use water to cool containers
exposed to fire.

SECTION 7 REACTIVITY INFORMATION

CONDITIONS UNDER WHICH THIS PRODUCT MAY BE UNSTABLE:

TEMPERATURES ABOVE: Begins to form sodium carbonate above 190 Deg.F
MECHANICAL SHOCK OR IMPACT: No
ELECTRICAL (STATIC) DISCHARGE: No
OTHER: Decomposes to emit carbon dioxide at 228 Deg.F
HAZARDOUS POLYMERIZATION: Will Not Occur
INCOMPATIBLE MATERIALS: Acids
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide, Sodium carbonate
OTHER CONDITIONS TO AVOID: Temperatures above 228 Deg.F (causes forma-
tion of carbon dioxide)

SUMMARY OF REACTIVITY:

OXIDIZER: No

PYROPHORIC: No
ORGANIC PEROXIDE: No
WATER REACTIVE: No

SECTION 8 FIRST AID

EYES: Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call a physician at once.

SKIN: Immediately flush with water for 15 minutes. Wash the contaminated skin with soap and water. If irritation develops, call a physician. If clothing comes in contact with the product, the clothing should be removed immediately and it should be laundered before re-use.

INGESTION: Immediately drink water to dilute. Induce vomiting. Call a physician at once. DO NOT give anything by mouth if the person is unconscious or if having convulsions.

INHALATION: If person experiences nausea, headache or dizziness, person should stop work immediately and move to fresh air until these symptoms disappear. If breathing is difficult, administer oxygen, keep the person warm and at rest. Call a physician. In the event that an individual inhales enough vapor to lose consciousness, person should be moved to fresh air at once and a physician should be called immediately. If breathing has stopped, artificial respiration should be given immediately. In all cases, ensure adequate ventilation and provide respiratory protection before the person returns to work.

SECTION 9 TOXICOLOGY AND HEALTH INFORMATION

ROUTES OF ABSORPTION

Inhalation, skin, eye, ingestion

WARNING STATEMENTS AND WARNING PROPERTIES
MAY CAUSE EYE IRRITATION.

HUMAN THRESHOLD RESPONSE DATA

ODOR THRESHOLD: None known or reported

IRRITATION THRESHOLD: None known or reported

IMMEDIATELY DANGEROUS TO LIFE OR HEALTH: No IDLH concentration has been established for this product.

SIGNS, SYMPTOMS AND EFFECTS OF EXPOSURE

INHALATION:

ACUTE:

If inhaled, mild irritation may result to the throat, upper respiratory tract, and lungs. Any irritation would be transient with no permanent damage expected.

CHRONIC:

If significant amounts of dust are inhaled, more severe irritation may occur. Absorption of large amounts of sodium bicarbonate has caused metabolic alkalosis and edema.

EYE:

Contact with the eyes would be expected to cause irritation consisting of reversible redness, swelling, and mucous discharge to the conjunctiva. No corneal involvement or visual impairment would be expected.

SKIN:

ACUTE:

Skin contact may cause mild irritation consisting of transient redness. This irritant effect would not result in permanent damage.

CHRONIC:

Prolonged or repeated skin contact may cause more severe irritation.

INGESTION:

ACUTE:

If ingested, gastroenteritis may occur with nausea, vomiting, lethargy, and diarrhea.

CHRONIC:

Absorption of large amounts of sodium bicarbonate has caused metabolic alkalosis and edema.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

There are no medical conditions known to be aggravated by exposure.

INTERACTIONS WITH OTHER CHEMICALS WHICH ENHANCE TOXICITY:

There are no chemicals known to enhance the toxicity of the product.

ANIMAL TOXICITY:

ACUTE TOXICITY:

Inhalation LC 50: No available data
Dermal LD 50: Believed to be > 2 g/kg (rabbit)
Oral LD 50: 4.2 g/kg (rat)
Irritation: Mild eye and skin irritant

ACUTE TARGET ORGAN TOXICITY:

Mild eye, skin, and respiratory irritation.

CHRONIC TARGET ORGAN TOXICITY:

There are no known or reported effects from repeated exposure.

REPRODUCTIVE AND DEVELOPMENTAL TOXICITY:

Sodium bicarbonate was tested in a teratogenicity study in rabbits. No teratogenic effects were found.

CARCINOGENICITY:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

MUTAGENICITY:

This product is not known or reported to be mutagenic.

AQUATIC TOXICITY:

Bluegill, 96 hr LC50: 8,250 mg/l (nominal, static)
Mosquito fish, 96 hr LC50: 7,550 mg/l (nominal, static)

SECTION 10 TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT REGULATED AS A DOT HAZARDOUS MATERIAL.

SECTION 11 SPILL AND LEAKAGE PROCEDURES

FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC AT 800-424-9300.

REPORTABLE QUANTITY: Not Applicable (Per 40 CFR 302.4)

SPILL MITIGATION PROCEDURES:

Water Release - this material is heavier than water. This material is soluble in water.

Land Spill - Sweep or vacuum spill materials and place in a container appropriate for this material.

SPILL RESIDUES: Dispose of per guidelines under Section XII, WASTE DISPOSAL. This material may be neutralized for disposal; you are requested to contact at 800-6546- 911 before beginning any such operation.

PERSONAL PROTECTION FOR EMERGENCY SPILL AND FIRE-FIGHTING SITUATIONS: No extra protection required beyond that listed in Section V. In case of fire, use normal fire fighting equipment, including a NIOSH approved self-contained breathing apparatus (SCBA)).

SECTION 12 WASTE DISPOSAL

If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

As a nonhazardous solid waste it should be disposed of in accordance with local, state, and federal regulations by treatment in a wastewater treatment system.

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL. THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

SECTION 13 ADDITIONAL REGULATORY STATUS INFORMATION

TOXIC SUBSTANCES CONTROL ACT: This substance is listed on the Toxic Substances Control Act inventory.

SUPERFUND AMENDMENT AND REAUTHORIZATION ACT TITLE 3:

HAZARD CATEGORIES, PER 40 CFR 370.2:

HEALTH: Immediate (Acute)

PHYSICAL: None

EMERGENCY PLANNING AND COMMUNITY RIGHT TO KNOW, PER 40 CFR 355, APP. A:

EXTREMELY HAZARDOUS SUBSTANCES - THRESHOLD PLANNING QUANTITY:

None Established

SUPPLIER NOTIFICATION REQUIREMENTS, PER 40 CFR 372.45:

None Established

SECTION 14 ADDITIONAL INFORMATION

MSDS REVISION STATUS: Precautions for Handling, Toxicology and Personal Protective Equipment revised.

SECTION 15 MAJOR REFERENCES

1. Cairns, J.C., and Scheier, A. (1959). The Relationship of Bluegill Sunfish Body Size to its Tolerance for Some Common Chemicals. Proc. 13th Ind. Waste Conf., Purdue Univ. Eng. Bull. 96:243-252.
2. Wallen, I.E., Greer, W.C., and Lasater, R. (1957) Toxicity of Gambusia affinis of Certain Pure Chemicals in Turbid Waters. Sewage Ind. Wastes 29(6): 965-711.

Additional references are available upon request

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT.

Arch Chemicals, Inc.
MSDS Control
501 Merritt 7
PO Box 5204
Norwalk, CT 06856-5204